



Metabolic engineering of baker's yeast for the production of long chain bio-polyP

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Biotechnological polyP production



<https://www.saarbruecken.de/media/download-5742c8596f1a6>

Wash water P_i



https://homeopathyforhealthinfrica.org/wp-content/uploads/2015/11/brassica_napus.jpg

Plant P_i

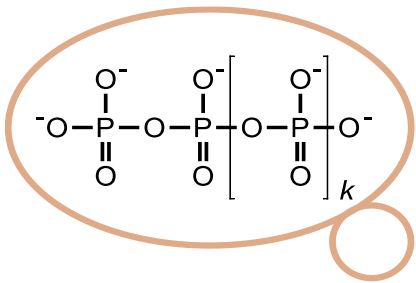


<https://i.pinimg.com/originals/bd/ea/7c/bdea7c21a7763bbae5b8f3f65c741346.png>

Africa P_i

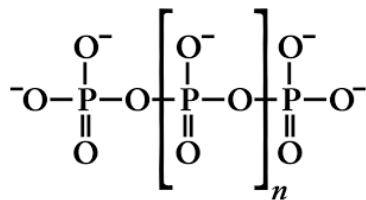
Different P_i sources

[1, 2] ↓ Polyphosphate-Hyperaccumulation of yeast

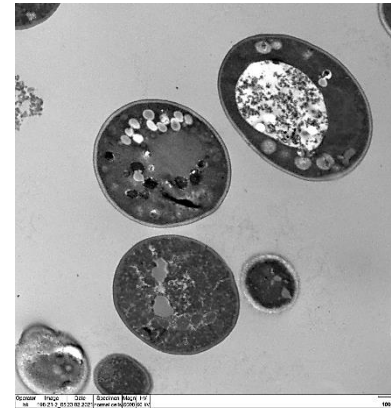


Polyphosphate-rich yeast (*S. cerevisiae*)

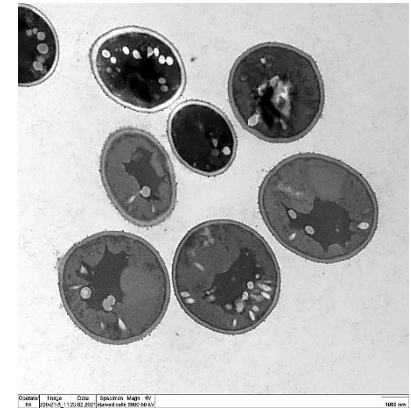
[3, 4] ↓ Extraction of polyP or yeast extract production



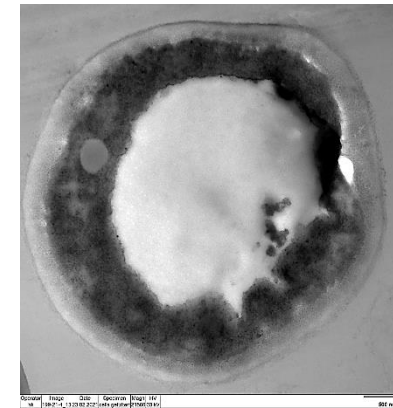
Biotechnological produced yeast



S. cerevisiae



Starved cells



Phosphate fed cells

- [1] Christ JJ, Blank LM (2019) *FEMS Yeast Research*, 19 (3), DOI: 10.1093/femsyr/foz011
- [2] Christ JJ, Blank LM (2018) patent application DE 10 2018 130 081.6, PCT/EP2019/082709.
- [3] Christ JJ et al (2020) *Biotechnology and Bioengineering* 117(7), DOI: 10.1002/bit.27337
- [4] Christ JJ, Blank LM (2019) patent application, DE 10 2019 131 561.1.

Thank you for your attention!

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